

**Notice of Allowability**

Application No.

10/635,170

Examiner

Peter J. Vrettakos

Applicant(s)

LOPATH ET AL.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8-6-03.
2. ☒ The allowed claim(s) is/are 8-43 and 46-55.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 9-30-05.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>9/20/04, 2/17/04</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                                       | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

### EXAMINER'S AMENDMENT

This application is a CIP of 10/244,271 09/16/2002 PAT 6,808,524.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Marcus Millet on 9-30-05.

The application has been amended as follows:

**1) Cancel claims 1-7.**

**2) Amend claim 8 as follows:**

Apparatus comprising:

(a) a balloon having proximal and distal ends and a lengthwise direction between said ends, said balloon having an inflated condition and a deflated condition, said balloon having a deflated length between said ends in the deflated condition and an inflated length in the inflated condition, said inflated length being less than said deflated length, and

(b) a plurality of engagement elements disposed at least partially within said balloon and movable with respect to one another in the lengthwise direction, said balloon urging said engagement elements into engagement with one another upon inflation of the balloon, said engagement elements being movable

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away from one another in the lengthwise direction upon deflation of the balloon, and

wherein said plurality of engagement elements includes a first engagement element and a second engagement element, said second engagement element at least partially telescopically encompassing said first engagement element when said balloon is in said inflated condition.

**3) Amend claim 31 as follows:**

31. Apparatus as claimed in claim 8 further comprising an axial member extending in the lengthwise direction within the balloon, said axial member at least partially constraining said engagement elements in radial directions transverse to said lengthwise direction.

**4) Cancel claims 44-45.**

**5) Amend claim 46 as follows:**

46. A method of placing and operating a device comprising:

(a) threading a carrier catheter into the body of a mammalian subject while a balloon secured to the carrier catheter is in a deflated condition and while engagement elements disposed at least partially within the balloon are disengaged from one another; then

(b) inflating the balloon so that the balloon expands in radial directions and contracts in a lengthwise direction, and so that contraction of the balloon moves the engagement elements into proximity with one another;

(c) performing a procedure using the balloon in its inflated condition, said engagement elements reinforcing the balloon during said procedure; and then

(d) deflating the balloon so that said engagement elements disengage from one another and withdrawing the carrier catheter and balloon while said engagement elements are disengaged from one another; and

(e) urging a distal end of the balloon away from a proximal end of the balloon in a lengthwise direction during said deflating step; and

wherein adjacent ones of said engagement elements are telescopically engaged in one another when said balloon is in an inflated condition, and wherein said engagement elements are constrained in coaxial alignment with one another when said balloon is inflated.

**6) Amend claim 47 as follows:**

47. A method as claimed in claim 46, one of said engagement elements being connected to the proximal end of the balloon, another one of said engagement elements being connected to the distal end of the balloon, said engagement elements holding said proximal and distal ends of the balloon in alignment with one another when the balloon is inflated.

**7) Amend claim 48 as follows:**

48. A method as claimed in claim 46 wherein a stem projecting from a first one of said engagement elements is disposed within a second one of said engagement elements when said balloon is in said deflated condition during said threading

step, said stem allowing said second engagement element to pivot relative to said first engagement element during said threading step.

**8) Amend claim 50 as follows:**

50. A method as claimed in claim 46 wherein said step of urging the distal end of the balloon is performed by a spring disposed within the balloon.

**9) Amend claim 52 as follows:**

52. A method as claimed in claim 46 further comprising the step of providing a guide element extending through the carrier catheter, extending through a tube disposed within the balloon and extending beyond the balloon, stretching the tube upon movement of the distal end of the balloon away from the proximal end and foreshortening the tube upon inflation of the balloon.

**10) Amend claim 53 as follows:**

53. A method as claimed in claim 46 wherein said step of performing a procedure includes directing energy from a transducer disposed within the balloon to a wall of the balloon and reflecting the energy towards a target region of the subject at the wall of the balloon.

**11) Amend claim 54 as follows:**

54. Apparatus as claimed in claim 8 wherein said plurality of engagement elements form a structure which substantially reinforces said balloon against lateral displacement when said balloon is in said inflated condition and said engagement elements are engaged with one another, said plurality of

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engagement elements permitting flexing of said balloon in lateral directions transverse to said lengthwise direction when said balloon is in said deflated condition.

**12) Amend claim 55 as follows:**

55. A method as claimed in claim 46 wherein, when said balloon is in said inflated condition said engagement elements substantially reinforce said balloon against displacement in lateral direction transverse to said lengthwise direction, and said engagement elements allow flexing of said balloon in said lateral directions when said balloon is in said deflated condition.

To this end, the application has two independent claims (8 and 46).

**Formal drawings are now required.**

The following is an examiner's statement of reasons for allowance: The prior art neglects to disclose a balloon apparatus with a plurality of engagement elements, which when the balloon is inflated telescopically encompass each other. This is seen in figures 4 and 5 elements 260 and 270.

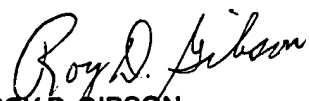
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J. Vrettakos whose telephone number is 571-272-4775. The examiner can normally be reached on M-F 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C. Dvorak can be reached on 571-272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Pete Vrettakos  
September 30, 2005



ROY D. GIBSON  
PRIMARY EXAMINER